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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/700,450	11/05/2003	Wilfried Naber	4002-1020-1	6370
466	7590	10/07/2005	EXAMINER	
YOUNG & THOMPSON 745 SOUTH 23RD STREET 2ND FLOOR ARLINGTON, VA 22202			SPERTY, ARDEN B	
			ART UNIT	PAPER NUMBER
			1771	

DATE MAILED: 10/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/700,450

Applicant(s)

NABER ET AL.

Examiner

Arden B. Sperty

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 August 2005.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
4a) Of the above claim(s) 1 and 2 is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 3-15 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 05 November 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 11/05/03.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

NON-FINAL OFFICE ACTION

Election/Restrictions

1. Claims 1-2 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 8/12/2005. The traversal is not found persuasive for the following reasons.
2. Applicant argues that claims 1 and 3 are not divisible because the method of claim 1 produces the product of claim 3. This argument is not commensurate with the requirements for restriction. Groups are restricted if it can be shown that the process can produce a materially different product, or that the product can be produced by a materially different process. Therefore, the argument that the process can produce a product as in claim 3 does not address either basis for restriction. The process of claim 1 can also produce other products, and the product of claim 3 can also be produced by other processes. This explanation also applies to Applicant's arguments that neither one- nor two-way distinctness exists between 1, 3 and 15, and to the arguments that claim 1 cannot produce a product other than 2 and 15, and that claims 3 and 15 cannot be made by a process other than that of claim 1.
3. Applicant further asserts that claim 15 is a linking claim. Actually, claim 15 is not a linking claim. The method of claim 1 is incorporated by reference, and therefore claim 15 is a product-by-process claim. The process is considered for the structural implications it has on the final product, but ultimately the final

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product is examined, and prior art made by any method applies as long as the final product is the same. Additionally, the product of claim 15 is different than the product of claim 3. The product of claim 15 need not be cross-linked, or even contain any binder at all. The product of claim 15 is merely a two-layer mineral wool nonwoven fabric, wherein the two layers are made of the same material. Although claim 15 does not claim the same product as claim 3, the claim is generic with respect to claim 3, and is therefore currently examined. Art which reads on claim 3 will include two layers of the same composition stacked on top of each other, and therefore will inherently read on claim 15.

4. Applicant then states a personal opinion about the function of the Office's classification system. Personal opinions are not proper in this particular legal situation and are disregarded. A statement that is disregarded inherently cannot be persuasive.

Drawings

5. New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application because the labels of Figure 4 must be in English, and the axes of the graph must be labeled with the appropriate units. A title and labels for the graph axes are also requested. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

Specification

6. The specification is objected to because the continuity data on page 1 of must be updated to disclose the patent that has issued from Serial No.

09/775831. The patent number is US Patent 6675445.

7. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: The limitation of claims 3 and 9 requiring "cross-linked mineral wool" is unsupported by the specification.

Claim Rejections - 35 USC § 112

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claims 3-4, 7, and 9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

10. The phrasing of lines 7-8 of claim 3 is confusing. It is not clear what structure the "fiberizing" phrase implies, nor is it even clear what the phrase means. The last section of claim 3 is also unclear. As far as can be understood from the language of the last two sections of the claim, the product comprises an inner layer having constant density (no gradient), and outer layers having a higher density than the inner layer. The outer layers are the same with regard to the fiber and/or binder content. The inner layer sandwiched between two layers

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of higher density forms a product that is symmetrical along a horizontal plane, and in which the density increases from the horizontal plane toward an external surface. The density gradient refers to the presence of a low density material at the horizontal plane and a higher density material farther away from the horizontal plane, i.e. at the outer surface.

11. Claims 3 and 9 each require a "cross-linked mineral wool," but it is not clear what is intended by this limitation. Cross-linking may refer to the binder, the wool's cystine linkages, or the wool further treated or cured to cross-link the fibers.

12. Claim 4 is indefinite because claim 3 requires a constant density in the inner layer. Since claim 3 requires a constant density, a dependent claim requiring a density gradient within the same layer is inconsistent. Claim 4 is not examined with respect to the prior art.

13. Regarding claim 7, the "higher" binder content is a relative term, and is not defined without a standard of reference against which to compare it. The amount of binder is unclear. Claim 7 is not examined with respect to the prior art because the intended structure is unclear.

14. Claim 9 is virtually incomprehensible. Anything that has density inherently has a "density distribution;" what do the first three lines of the claim mean? And what is a "homogenous mass distribution(s) transversely"? The claim, which should be in the form of a sentence, does not appear to form a complete concept. The claim would be interpreted to the best of the examiner's ability and

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examined accordingly, but even a partial concept is unascertainable. Claim 9 has not been examined with respect to the prior art.

Claim Rejections - 35 USC § 102

15. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

16. Claims 3 and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent 4746560 to Goeden.

The Goeden reference teaches a composite comprising a reinforced base region having low density glass/thermosetting resin mats sandwiched between high density glass/thermosetting resin mats (col. 3, lines 19-35). Therefore, the inner layer has a lower density than the outer layers, as required by the claim, and the base region is symmetrical when formed with the disclosed number of layers (col. 3, lines 29-31).

17. Claims 3 and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent 4917750 to Klose.

18. Figure 5 of the reference shows a sequence of symmetrical sections comprising dense, compacted mineral fiber layers sandwiching uncompressed, less dense mineral fiber layers therebetween (col. 10, lines 47-60).

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19. An additional embodiment, shown in Figure 6, shows a symmetrical product having outer, highly compressed (dense) mineral fiber layers, and an inner, less dense mineral fiber layer (col. 10, lines 61-col. 11, line 4).

20. Claims 3 and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent 4940629 to Weber et al.

21. The Weber reference teaches a fiber reinforced thermoplastic material wherein the outer skins are compacted to form densified outer skin layers (col. 1, lines 50-59). Glass fiber mats are employed, such that when the thermoplastic material expands, the fiber is uniformly distributed over the entire thickness of the resulting material (col. 2, lines 39-65). By compacting the outer skins above the softening point temperature (col. 1, lines 58-59), solid outer skins are formed having density 1.5 to 20 times the density of the core zone (col. 2, lines 1-13). The outer skins form a sandwichlike structure wherein drop in density from the skin to the core can be continuous.

Claim Rejections - 35 USC § 103

22. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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23. Claims 5, 6, 8, and 10-14, are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 4746560 to Goeden, as applied to claim 3 above.

24. Thickness and density are intimately related, and both are result effective variables, easily determined and optimized by one of ordinary skill in the art depending on the ultimate intended use of the product. Determining and optimizing density and thickness are possible because the results are predictable. Absent a showing of criticality, and unexpected results, with the claimed densities, it would have been obvious to one of ordinary skill in the art to optimize the density, using simple engineering concepts, to produce a final product with desirable results. The same is true of thickness. Additionally, neither property is evident to be detrimental to the function of the prior art. Therefore, absent a showing of unexpected results with the claimed thickness, it would have been obvious to optimize the thickness of the composite and its constituent layers for optimum results.

25. Regarding claims 8 and 12, although the reference does not perform the claimed measurements, it is presumed that the amount of binder in each layer is easily determined, and optimizable, to one of ordinary skill in the art. Absent a showing of unexpected results, it would have been obvious to use an appropriate amount of binder to achieve properties desired according to the intended use.

26. Claims 5, 6, 8, and 10-14, are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 4917750 to Klose, as applied to claim 3 above.

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27. The reference teaches that the total thickness of the disclosed composite material is dependent on the end use of the material (col. 2, line 56+), and one of the highly compressed layers having a desirable thickness of about 5 mm.

Absent a showing of unexpected results with the claimed thickness, it would have been obvious to optimize the thickness of the composite and its constituent layers for optimum results. Density is another result effective variable, easily determined and optimized by one of ordinary skill in the art depending on the ultimate intended use of the product. Determining and optimizing density and thickness are possible because the results are predictable. Additionally, neither property is evident to be detrimental to the function of the prior art. Absent a showing of criticality, and unexpected results, with the claimed densities, it would have been obvious to one of ordinary skill in the art to optimize the density, using simple textile engineering concepts, to produce a final product with desirable results.

28. Regarding claims 8 and 12, although the reference does not perform the claimed measurements, it is presumed that the amount of binder in each layer is easily determined, and optimizable, to one of ordinary skill in the art. Absent a showing of unexpected results, it would have been obvious to use an appropriate amount of binder to achieve properties desired according to the intended use.

29. Claims 5, 6, 8, and 10-14, are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 4940629 to Weber, as applied to claim 3 above.

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30. Thickness and density are intimately related, and both are result effective variables, easily determined and optimized by one of ordinary skill in the art depending on the ultimate intended use of the product. Determining and optimizing density and thickness are possible because the results are predictable. Neither property is evident to be detrimental to the function of the prior art. Absent a showing of criticality, and unexpected results, with the claimed densities, it would have been obvious to one of ordinary skill in the art to optimize the density, using simple engineering concepts, to produce a final product with desirable results. The same is true of thickness, therefore absent a showing of unexpected results with the claimed thickness, it would have been obvious to optimize the thickness of the composite and its constituent layers for optimum results.

31. Regarding claims 8 and 12, although the reference does not perform the claimed measurements, it is presumed that the amount of binder in each layer is easily determined, and optimizable, to one of ordinary skill in the art. Absent a showing of unexpected results, it would have been obvious to use an appropriate amount of binder to achieve properties desired according to the intended use.

Conclusion

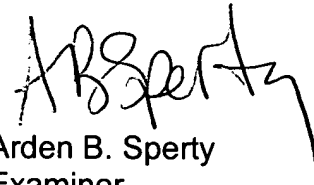
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Arden B. Sperty whose telephone number is (571)272-1543. The examiner can normally be reached on M-Th, 08:00-16:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (571)272-1478. The fax

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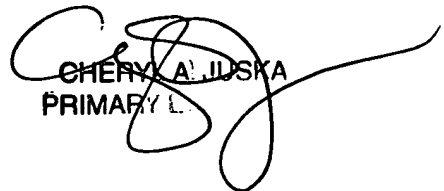
phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Arden B. Sperty
Examiner
Art Unit 1771

Sept 21, 2005



CHERYL A. JUSKA
PRIMARY